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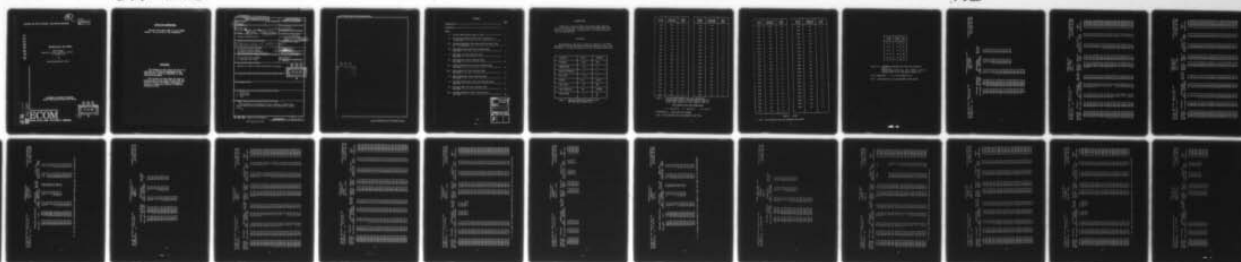
ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/1  
14818C LANCE MISSILE NUMBER 3292, ROUND NUMBER 298 APT (24 AUGU--ETC(U)  
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September 1977

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METEOROLOGICAL DATA REPORT

14818C LANCE  
MISSILE NO. 3292, ROUND NO. 298 APT  
(24 AUGUST 1977)

BY

WSMR METEOROLOGICAL TEAM

ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 14818C Lance, Missile Number 3292, Round Number 298 APT, are presented in tabular form.		

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## INTRODUCTION

14818C Lance, Missile Number 3292, Round Number 298 APT, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 0900 HRS MDT, 24 August 1977. The scheduled launch time was 0900 HRS MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3,989.0	FEET/MSL
PRESSURE	880.0	MBS
TEMPERATURE	26.1	°C
RELATIVE HUMIDITY	52	%
DEW POINT	15.6	°C
DENSITY	1,015	GM/M <sup>3</sup>
WIND SPEED	10	MPH
WIND DIRECTION	060	DEGREES
CLOUD COVER	0 7	Cu Ci

TABLE I. SURFACE OBSERVATIONS TAKEN AT WSD,  
0900 HRS MDT/24 AUGUST 1977.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	030	6.0	2100	106	3.5
100	045	1.0	2200	090	3.5
200	011	5.0	2300	059	3.0
300	001	8.5	2400	011	2.5
400	344	8.0	2500	344	3.5
500	353	8.0	2600	338	5.5
600	356	7.5	2700	339	7.0
700	360	6.0	2800	344	7.0
800	347	4.5	2900	348	7.0
900	346	2.0	3000	351	6.5
1000	360	1.0	3100	351	6.0
1100	104	2.0	3200	355	5.5
1200	113	4.0	3300	360	4.5
1300	110	7.5	3400	360	4.0
1400	114	8.5	3500	009	3.0
1500	118	8.5	3600	018	3.0
1600	125	8.0	3700	027	3.0
1700	132	6.0	3800	040	4.0
1800	127	5.0	3900	045	4.0
1900	126	4.5	4000	040	4.0
2000	120	4.0	4100	045	3.5

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1  
RELEASED FROM LC-36, AT 0900 HRS MDT/24 AUGUST 1977  
14818C LANCE, MISSILE NO. 3292, ROUND NO. 298 APT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 504,465.56    Y = 190,780.55    Z = 4,040.71

APPROXIMATELY: 6 MILES WEST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.



HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	039	3.0	6700	191	2.5
4300	022	2.5	6800	202	2.5
4400	027	2.0	6900	202	2.5
4500	027	2.0	7000	198	3.0
4600	034	2.0	7100	196	3.5
4700	034	2.0	7200	187	4.0
4800	018	1.5	7300	187	4.0
4900	360	1.0	7400	180	4.0
5000	315	0.5	7500	173	4.0
5100	297	1.1	7600	173	4.0
5200	297	1.1	7700	166	4.0
5300	270	1.5	7800	166	4.0
5400	270	1.5	7900	166	4.0
5500	270	1.5	8000	166	4.0
5600	270	1.5	8100	167	4.5
5700	252	1.5	8200	169	5.0
5800	252	1.5	8300	163	5.0
5900	252	1.5	8400	165	5.5
6000	256	2.0	8500	160	6.0
6100	243	2.0	8600	162	6.0
6200	225	2.0	8700	159	7.0
6300	225	2.0	8800	159	7.0
6400	207	2.0	8900	160	7.5
6500	194	2.0	9000	162	8.0
6600	191	2.5			

TABLE II. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.



T-TIME (SEC)	SPEED (MPH)	DIR DEG
-30.0	08	286
-20.0	08	284
-10.0	07	283
-00.00	08	288
+10.00	08	289

TABLE III. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION  
POLE NO. 1  
14818C LANCE, MISSILE NO. 3292, ROUND NO. 298 APT  
LAUNCHED FROM LC-39, 0900 MDT/24 AUGUST 1977

WSTM COORDINATES: X = 1/4 MILE NORTH OF T-9

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

SIGNIFICANT LEVEL DATA  
2360020623  
WHITE SANDS  
TABLE IV.

STATION ALTITUDE 3989.00 FEET MSL'  
24 AUG. 77 0850 HRS MDT  
ASCENSION NO. 623

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
880.0	3989.0	26.1	15.8
850.0	4995.0	24.5	12.8
700.0	10484.8	14.6	3.7
577.8	15679.0	1.1	-7.1
549.4	17000.5	-2.5	-6.5
500.0	19435.1	-6.4	-15.8
452.8	21953.7	-11.1	-20.9
430.3	23234.1	-11.9	-27.0
423.8	23615.0	-13.0	-24.3
400.0	25052.2	-15.1	-32.9
388.3	25785.2	-16.5	-32.7
369.3	27013.5	-19.5	-26.8
343.3	28776.0	-23.5	-38.3
311.6	31071.7	-28.6	-39.2
306.8	31435.2	-29.2	-39.5
300.0	31958.0	-30.5	-42.3
273.8	34059.9	-35.9	-50.7
250.8	36106.4	-40.7	
200.0	40946.8	-52.7	
169.8	44338.0	-60.9	
150.0	46824.5	-66.4	
115.8	51831.4	-75.5	
100.0	54616.1	-73.9	
96.8	55233.4	-75.5	
87.1	57262.4	-68.9	

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
2360020623  
WHITE SANDS  
TABLE V.

STATION ALTITUDE 3989.00 FEET MSL  
24 AUG. 77  
ASCENSION NO. 623  
0850 HRS MDT.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
3989.0	880.0	26.1	53.0	1016.5	676.5	20.0	9.9	1.000303
4000.0	879.7	26.1	52.9	1016.2	676.5	20.0	9.9	1.000302
4500.0	864.6	25.3	50.5	1002.1	675.4	21.6	9.0	1.000293
5000.0	849.8	24.5	48.0	988.1	674.3	23.5	8.2	1.000283
5500.0	835.0	23.6	48.0	974.0	673.2	25.9	7.4	1.000277
6000.0	820.3	22.7	48.0	960.1	672.1	28.4	6.6	1.000271
6500.0	805.9	21.8	48.0	946.3	671.0	29.0	6.3	1.000266
7000.0	791.8	20.9	48.0	932.8	669.9	29.6	6.0	1.000260
7500.0	777.9	20.0	48.0	919.5	668.8	27.2	4.7	1.000254
8000.0	764.3	19.1	48.0	906.3	667.7	22.3	3.4	1.000249
8500.0	750.9	18.2	48.0	893.4	666.6	4.1	2.2	1.000244
9000.0	737.7	17.3	48.0	880.6	665.5	321.6	1.5	1.000239
9500.0	724.8	16.4	48.0	868.0	664.4	265.6	2.0	1.000234
10000.0	712.1	15.5	48.0	855.6	663.3	245.6	2.7	1.000229
10500.0	699.8	14.6	48.0	843.5	662.2	234.4	3.2	1.000224
11000.0	686.8	13.3	48.6	832.0	660.7	213.8	3.3	1.000220
11500.0	674.2	12.0	49.2	820.6	659.1	196.3	3.8	1.000215
12000.0	661.9	10.7	49.8	809.5	657.5	183.9	4.7	1.000210
12500.0	649.8	9.4	50.3	798.5	655.9	178.5	5.6	1.000206
13000.0	637.9	8.1	50.9	787.7	654.4	177.1	6.4	1.000202
13500.0	626.2	6.8	51.5	777.0	652.8	181.9	6.9	1.000198
14000.0	614.8	5.5	52.1	766.5	651.2	187.8	7.3	1.000194
14500.0	603.3	4.2	52.6	756.1	649.6	196.9	7.2	1.000190
15000.0	592.3	2.9	53.2	745.9	648.1	205.8	7.2	1.000186
15500.0	581.6	1.6	53.8	735.8	646.5	214.3	7.2	1.000182
16000.0	570.8	.2	58.9	725.6	644.9	223.9	7.5	1.000180
16500.0	560.0	-1.1	66.4	715.4	643.3	234.1	8.0	1.000179
17000.0	549.4	-2.5	74.0	705.3	641.7	244.8	8.6	1.000177
17500.0	538.9	-3.3	68.5	694.1	640.7	253.4	9.4	1.000172
18000.0	528.6	-4.1	62.9	683.0	639.7	258.7	10.1	1.000167

STATION ALTITUDE 989.00 FEET MSL  
24 AUG. 77 0850 HRS MDT  
ASCENSION NO. 623

UPPER AIR DATA  
2360020623  
WHITE SANDS  
TABLE V. (CONT)

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
18500.0	518.4	-4.9	-12.0	57.4	672.1	638.6	264.1	10.4	1.000163
19000.0	508.5	-5.7	-14.0	51.8	661.3	637.6	270.5	10.6	1.000158
19500.0	498.7	-6.5	-16.0	46.9	650.7	636.6	283.1	11.3	1.000154
20000.0	489.0	-7.5	-17.0	46.3	640.4	635.4	292.2	12.7	1.000151
20500.0	479.5	-8.4	-18.0	45.7	630.1	634.3	298.0	14.3	1.000148
21000.0	470.1	-9.3	-19.0	45.1	620.1	633.1	294.5	14.9	1.000146
21500.0	461.0	-10.3	-20.0	44.5	610.2	632.0	289.4	15.3	1.000143
22000.0	452.0	-11.1	-21.1	43.4	600.3	630.9	282.4	15.6	1.000140
22500.0	443.1	-11.4	-23.3	36.7	589.3	630.5	277.5	16.0	1.000136
23000.0	434.5	-11.8	-25.7	30.1	578.5	630.1	273.3	16.4	1.000133
23500.0	425.8	-12.7	-25.0	34.7	569.0	629.0	268.9	16.6	1.000131
24000.0	417.5	-13.6	-26.3	33.2	559.6	627.9	267.5	15.7	1.000129
24500.0	409.0	-14.5	-29.2	26.9	550.1	627.0	264.9	14.5	1.000126
25000.0	400.8	-15.0	-32.5	20.7	540.8	626.0	260.5	13.2	1.000123
25500.0	392.8	-16.0	-32.8	21.8	531.9	624.9	249.7	12.8	1.000121
26000.0	384.9	-17.0	-31.1	28.1	523.3	623.6	240.0	13.1	1.000119
26500.0	377.1	-18.2	-28.5	39.9	515.1	622.2	234.2	14.2	1.000118
27000.0	369.5	-19.5	-26.9	51.7	507.1	620.7	235.4	13.2	1.000117
27500.0	361.9	-20.6	-29.6	44.3	499.0	619.3	239.5	11.7	1.000114
28000.0	354.5	-21.7	-32.6	36.3	491.0	617.8	247.7	9.9	1.000112
28500.0	347.2	-22.9	-36.1	28.4	483.2	616.4	250.9	10.3	1.000109
29000.0	340.1	-24.0	-38.3	25.1	475.4	615.0	252.0	11.2	1.000107
29500.0	333.0	-25.1	-38.4	27.5	467.5	613.6	252.5	12.6	1.000105
30000.0	326.0	-26.2	-38.6	29.9	459.8	612.3	252.6	13.2	1.000104
30500.0	319.2	-27.3	-38.8	32.3	452.3	610.9	252.6	13.4	1.000102
31000.0	312.5	-28.4	-39.1	34.7	444.8	609.5	251.8	13.2	1.000100
31500.0	305.9	-29.4	-39.8	35.3	437.1	608.3	253.8	13.1	1.000099
32000.0	299.5	-30.6	-42.5	29.8	430.0	606.8	258.4	12.9	1.000097
32500.0	293.0	-31.9	-44.4	27.4	423.0	605.2	267.4	12.2	1.000095
33000.0	286.7	-33.2	-46.3	25.0	416.2	603.5	274.9	11.8	1.000093



UPPER AIR DATA  
2360020623  
WHITE SANDS  
TABLE V. (CONT)

STATION ALTITUDE 989.00 FEET MSL  
24 AUG. 77  
ASCENSION NO. 623  
0850 HRS MDT

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
33500.0	280.5	-34.5	22.7	409.4	601.9	279.2	11.6	1.000092
34000.0	274.5	-35.7	20.3	402.8	600.3	277.0	11.8	1.000090
34500.0	268.5	-36.9	15.7**	395.9	598.8	272.1	12.4	1.000088
35000.0	262.6	-38.1	10.8**	389.2	597.3	265.0	13.9	1.000087
35500.0	256.8	-39.3	5.9**	382.6	595.8	257.0	14.8	1.000085
36000.0	251.2	-40.5	1.0**	376.0	594.3	251.3	15.8	1.000084
36500.0	245.5	-41.7		369.5	592.7	249.8	16.3	1.000082
37000.0	239.9	-42.9		363.0	591.1	250.8	16.5	1.000081
37500.0	234.4	-44.2		356.7	589.5	252.7	16.6	1.000079
38000.0	229.1	-45.4		350.4	587.9	254.3	16.4	1.000078
38500.0	223.9	-46.6		344.3	586.3	255.9	16.2	1.000077
39000.0	218.8	-47.9		338.3	584.7	257.8	16.1	1.000075
39500.0	213.8	-49.1		332.4	583.1	256.9	16.3	1.000074
40000.0	208.9	-50.4		326.7	581.5	255.5	16.5	1.000073
40500.0	204.2	-51.6		321.0	579.9	255.4	16.8	1.000071
41000.0	199.5	-52.8		315.4	578.3	256.2	17.0	1.000070
41500.0	194.7	-54.0		309.6	576.7	258.2	16.8	1.000069
42000.0	190.1	-55.2		303.9	575.1	262.5	17.1	1.000068
42500.0	185.8	-56.5		298.3	573.5	267.1	17.6	1.000066
43000.0	181.1	-57.7		292.8	571.9	268.6	18.9	1.000065
43500.0	176.8	-58.9		287.5	570.3	269.3	20.3	1.000064
44000.0	172.6	-60.1		282.2	568.7	269.2	21.1	1.000063
44500.0	168.4	-61.3		276.9	567.1	268.9	21.6	1.000062
45000.0	164.3	-62.4		271.5	565.6	270.0	20.9	1.000060
45500.0	160.2	-63.5		266.2	564.1	270.5	19.7	1.000059
46000.0	156.3	-64.6		261.0	562.6	263.0	17.5	1.000058
46500.0	152.4	-65.7		256.0	561.1	251.3	17.0	1.000057
47000.0	148.6	-66.7		250.8	559.7	238.2	19.1	1.000056
47500.0	144.9	-67.6		245.5	558.5	234.4	22.2	1.000055
48000.0	141.2	-68.5		240.3	557.3	233.7	25.4	1.000054

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.



UPPER AIR DATA  
2360020623  
WHITE SANDS  
TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL  
24 AUG. 77 0850 HRS MDT  
ASCENSION NO. 623

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
48500.0	137.6	-69.4		235.2	556.0	239.6	25.2	1.000052
49000.0	134.0	-70.4		230.3	554.8	246.2	24.8	1.000051
49500.0	130.6	-71.3		225.4	553.5	253.6	23.4	1.000050
50000.0	127.3	-72.2		220.6	552.3	260.3	21.2	1.000049
50500.0	124.0	-73.1		216.0	551.0	265.6	17.2	1.000048
51000.0	120.9	-74.0		211.4	549.8	270.3	13.1	1.000047
51500.0	117.8	-74.9		207.0	548.5	273.8	9.0	1.000046
52000.0	114.8	-75.4		202.2	547.8	264.9	6.3	1.000045
52500.0	111.8	-75.1		196.7	548.2	239.3	4.8	1.000044
53000.0	108.9	-74.8		191.3	548.6	241.5	4.6	1.000043
53500.0	106.1	-74.5		186.0	549.0	256.0	3.6	1.000041
54000.0	103.3	-74.3		180.9	549.4	334.0	3.6	1.000040
54500.0	100.6	-74.0		176.0	549.8	13.6	6.8	1.000039
55000.0	98.0	-74.9		172.2	548.5	31.9	10.9	1.000038
55500.0	95.3	-74.6		167.5	548.9	39.8	11.5	1.000037
56000.0	93.0	-73.0		161.9	551.1			1.000036
56500.0	90.6	-71.4		156.5	553.4			1.000035
57000.0	88.3	-69.8		151.2	555.6			1.000034

STATION ALTITUDE 3989.00 FEET MSL  
24 AUG. 77 0850 HRS MDT  
ASCENSION NO. 623

MANDATORY LEVELS  
2360020623  
WHITE SANDS  
TABLE VI.

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4994.	24.5	12.8	48.	23.5	8.2
800.0	6730.	21.4	10.0	48.	29.2	6.1
750.0	8556.	18.1	6.9	48.	.6	2.1
700.0	10485.	14.6	3.7	48.	234.0	3.2
650.0	12524.	9.4	-4	50.	178.4	5.6
600.0	14682.	3.8	-5.0	53.	200.4	7.2
550.0	16977.	-2.4	-6.5	74.	244.6	8.6
500.0	19444.	-6.4	-15.8	47.	282.2	11.3
450.0	22122.	-11.2	-21.5	42.	280.6	15.7
400.0	25070.	-15.1	-32.9	20.	258.8	13.0
350.0	28337.	-22.4	-34.7	31.	250.5	10.1
300.0	31991.	-30.5	-42.3	30.	258.9	12.9
250.0	36151.	-40.7			250.6	16.0
200.0	41007.	-52.7			256.5	16.9
175.0	43793.	-59.4			269.3	20.9
150.0	46907.	-66.4			237.9	19.2
125.0	50473.	-72.8			267.0	16.4
100.0	54733.	-73.9			28.8	9.8

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3951.40 FEET MSL  
24 AUG. 77 0915 HRS MDT  
ASCENSION NO. 73

SIGNIFICANT LEVEL DATA  
2360050073  
APACHE  
TABLE VII.

GEODETTIC COORDINATES  
32.62700 LAT DEG  
106.39352 LON DEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR DEWPOINT	REL. HUM.
MILLIBARS	MSL FEET	DEGREES CENTIGRADE	PERCENT
881.3	3951.4	26.7	15.4
850.0	4998.3	23.0	13.5
800.8	6704.0	22.4	9.6
700.0	10487.8	13.9	4.2
595.8	14863.6	3.1	-3.0
535.3	17674.5	-4.0	-7.3
500.0	19431.7	-6.7	-12.3
474.8	20751.1	-8.5	-24.1
400.0	25052.6	-15.0	-29.4
379.3	26361.7	-17.8	-28.9
351.3	28224.8	-22.0	-37.4
300.0	31965.7	-30.0	-45.6
261.3	35128.8	-38.4	-50.6
250.0	36116.8	-41.4	
200.0	40944.3	-53.2	
150.0	46835.7	-65.3	
138.3	48436.8	-69.0	
116.3	51771.3	-75.0	

GEODETIC COORDINATES  
32.62700 LAT DEG  
106.39352 LON DEG

UPPER AIR DATA  
2360050073  
APACHE  
TABLE VIII.

STATION ALTITUDE 3951.40 FEET MSL  
24 AUG. 77 0915 HRS MDT  
ASCENSION NO. 73

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
3951.4	881.3	26.7	15.4	50.0	1016.2	677.2	360.0	360.0	7.0	1.000300
4000.0	879.8	26.5	15.3	50.2	1015.1	676.9	360.0	360.0	7.0	1.000300
4500.0	864.8	24.8	14.4	52.6	1003.9	674.6	359.7	359.7	7.0	1.000294
5000.0	849.9	23.0	13.5	55.0	992.9	672.7	359.5	359.5	6.9	1.000288
5500.0	835.2	22.8	12.4	51.8	976.7	672.4	359.3	359.3	6.9	1.000280
6000.0	820.8	22.6	11.3	48.5	960.7	672.1	359.0	359.0	6.9	1.000272
6500.0	806.5	22.5	10.1	45.3	944.9	671.8	4.3	4.3	5.8	1.000264
7000.0	792.4	21.7	9.2	44.6	930.9	670.9	21.1	21.1	4.1	1.000258
7500.0	778.5	20.6	8.5	45.7	918.2	669.5	32.2	32.2	2.8	1.000253
8000.0	764.7	19.5	7.8	46.7	905.6	668.2	36.4	36.4	1.6	1.000249
8500.0	751.3	18.4	7.1	47.8	893.2	666.9	45.2	45.2	1.0	1.000244
9000.0	738.0	17.2	6.4	48.9	881.0	665.5	58.9	58.9	.7	1.000240
9500.0	725.0	16.1	5.7	49.9	869.0	664.2	229.8	229.8	.4	1.000235
10000.0	712.2	15.0	4.9	51.0	857.1	662.8	231.3	231.3	1.6	1.000231
10500.0	699.7	13.9	4.2	52.0	845.4	661.5	229.6	229.6	2.8	1.000226
11000.0	686.9	12.6	3.4	53.4	833.7	660.0	226.5	226.5	3.8	1.000222
11500.0	674.4	11.4	2.6	54.8	822.2	658.5	223.7	223.7	4.7	1.000218
12000.0	662.1	10.2	1.8	56.1	810.8	657.1	212.0	212.0	4.7	1.000214
12500.0	650.0	8.9	1.0	57.5	799.7	655.6	201.0	201.0	4.9	1.000210
13000.0	638.1	7.7	.2	58.9	788.6	654.1	194.1	194.1	5.6	1.000205
13500.0	626.5	6.5	-.7	60.3	777.8	652.6	192.1	192.1	6.4	1.000202
14000.0	615.1	5.2	-1.5	61.6	767.1	651.1	195.1	195.1	7.6	1.000198
14500.0	603.8	4.0	-2.4	63.0	756.6	649.6	197.6	197.6	8.5	1.000194
15000.0	592.7	2.8	-3.2	64.7	746.1	648.1	199.8	199.8	9.3	1.000190
15500.0	581.5	1.5	-3.9	67.2	735.4	646.6	205.2	205.2	9.6	1.000187
16000.0	570.6	.2	-4.6	69.7	725.0	645.1	211.2	211.2	9.8	1.000183
16500.0	559.8	-1.0	-5.4	72.2	714.7	643.5	219.9	219.9	9.2	1.000180
17000.0	549.2	-2.3	-6.2	74.6	704.5	642.0	229.3	229.3	8.8	1.000177
17500.0	538.9	-3.6	-7.0	77.1	694.6	640.5	239.1	239.1	8.4	1.000174
18000.0	526.6	-4.5	-8.2	75.4	683.8	639.3	250.9	250.9	8.8	1.000170



STATION ALTITUDE 3951.40 FEET MSL  
 24 AUG. 77 0915 HRS MDT  
 ASCENSION NO. 73

UPPER AIR DATA  
 2360050073  
 APACHE  
 TABLE VIII. (CONT)

GEONETIC COORDINATES  
 32.62700 LAT DEG  
 106.39352 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
18500.0	518.4	-5.3	-9.6	71.4	672.7	638.5		262.2	9.8	1.000165
19000.0	508.5	-6.0	-11.1	67.4	661.8	637.3		275.5	10.6	1.000161
19500.0	498.7	-6.8	-12.8	62.1	651.1	636.4		288.4	11.6	1.000157
20000.0	489.0	-7.5	-16.5	48.1	640.4	635.4		296.5	12.9	1.000152
20500.0	479.5	-8.2	-21.2	34.0	629.8	634.5		294.9	14.5	1.000146
21000.0	470.1	-8.9	-24.4	27.1	619.3	633.5		285.8	15.7	1.000143
21500.0	460.8	-9.6	-25.0	27.2	608.8	632.6		278.7	17.0	1.000140
22000.0	451.7	-10.4	-25.6	27.3	598.5	631.7		275.9	18.0	1.000137
22500.0	442.8	-11.1	-26.2	27.4	588.4	630.8		276.6	18.0	1.000135
23000.0	434.1	-11.9	-26.8	27.5	578.5	629.9		276.5	17.6	1.000133
23500.0	425.5	-12.7	-27.4	27.6	568.7	629.0		274.0	16.8	1.000130
24000.0	417.1	-13.4	-28.1	27.8	559.2	628.0		271.6	15.9	1.000128
24500.0	408.9	-14.2	-28.7	27.9	549.7	627.1		268.9	14.8	1.000126
25000.0	400.8	-14.9	-29.3	28.0	540.5	626.2		262.0	13.9	1.000123
25500.0	392.8	-16.0	-29.1	31.1	531.8	624.9		252.9	13.3	1.000122
26000.0	384.9	-17.0	-28.9	34.5	523.2	623.6		242.1	13.3	1.000120
26500.0	377.1	-18.1	-29.5	36.0	514.9	622.3		239.2	12.3	1.000118
27000.0	369.5	-19.2	-31.6	32.2	506.7	620.9		240.1	11.3	1.000115
27500.0	361.9	-20.4	-33.9	28.4	498.6	619.5		245.3	10.4	1.000113
28000.0	354.6	-21.5	-36.3	24.7	490.7	618.1		250.4	10.8	1.000111
28500.0	347.2	-22.6	-38.0	22.8	482.7	616.7		252.3	12.1	1.000109
29000.0	340.0	-23.7	-39.1	22.4	474.6	615.4		251.8	13.8	1.000107
29500.0	332.9	-24.7	-40.2	22.0	466.7	614.1		249.8	15.5	1.000105
30000.0	325.9	-25.8	-41.3	21.6	459.0	612.8		249.1	15.8	1.000103
30500.0	319.1	-26.9	-42.4	21.2	451.3	611.4		248.5	15.6	1.000101
31000.0	312.5	-27.9	-43.5	20.8	443.9	610.1		247.9	15.3	1.000100
31500.0	306.0	-29.0	-44.6	20.4	436.5	608.8		250.0	15.0	1.000098
32000.0	299.6	-30.1	-45.7	20.1	429.3	607.4		254.6	14.5	1.000096
32500.0	293.1	-31.4	-46.4	21.0	422.3	605.7		263.7	13.8	1.000095
33000.0	286.8	-32.7	-47.1	22.0	415.5	604.1		269.0	13.6	1.000093



UPPER AIR DATA  
2360050073  
APACHE  
TABLE VIII. (CONT)

STATION ALTITUDE 3951.40 FEET MSL  
24 AUG. 77  
ASCENSION NO. 73

GEOMETRIC COORDINATES  
32.62700 LAT DEG  
106.39352 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	280.6	-34.1	-47.9	22.9	408.8	602.4		271.9	13.5	1.000092
34000.0	274.5	-35.4	-48.7	23.9	402.2	600.7		269.5	13.6	1.000090
34500.0	268.6	-36.7	-49.5	24.8	395.7	599.0		269.1	14.0	1.000089
35000.0	262.8	-38.1	-50.4	25.8	389.4	597.4		270.5	14.7	1.000087
35500.0	257.0	-39.5	-55.5	16.2**	383.2	595.5		268.7	15.1	1.000086
36000.0	251.3	-41.0	-69.1	3.1**	377.2	593.5		265.3	15.6	1.000084
36500.0	245.6	-42.3			370.7	591.9		254.6	16.9	1.000083
37000.0	240.0	-43.6			364.2	590.3		249.4	18.2	1.000081
37500.0	234.5	-44.8			357.7	588.7		248.9	19.1	1.000080
38000.0	229.2	-46.0			351.4	587.1		252.5	19.3	1.000078
38500.0	223.9	-47.2			345.3	585.6		255.7	19.7	1.000077
39000.0	218.8	-48.4			339.2	584.0		256.9	20.2	1.000076
39500.0	213.8	-49.7			333.3	582.4		256.9	20.6	1.000074
40000.0	208.9	-50.9			327.5	580.8		256.0	20.9	1.000073
40500.0	204.2	-52.1			321.8	579.2		254.6	21.2	1.000072
41000.0	199.5	-53.3			316.1	577.6		254.9	21.3	1.000070
41500.0	194.6	-54.3			309.9	576.3		259.7	20.9	1.000069
42000.0	190.0	-55.4			303.8	574.9		263.5	20.9	1.000068
42500.0	185.4	-56.4			297.9	573.6		266.6	21.1	1.000066
43000.0	180.9	-57.4			292.1	572.2		265.3	21.3	1.000065
43500.0	176.5	-58.4			286.4	570.8		264.8	21.6	1.000064
44000.0	172.3	-59.5			280.9	569.5		265.7	22.2	1.000063
44500.0	168.1	-60.5			275.4	568.1		265.6	22.7	1.000061
45000.0	164.1	-61.5			270.1	566.7		265.0	23.2	1.000060
45500.0	160.1	-62.6			264.9	565.4		262.0	23.6	1.000059
46000.0	156.2	-63.6			259.7	564.0		258.8	24.1	1.000058
46500.0	152.5	-64.6			254.7	562.6		253.5	24.0	1.000057
47000.0	148.8	-65.7			249.8	561.1		248.1	24.1	1.000056
47500.0	145.0	-66.8			244.9	559.6		242.8	24.4	1.000055
48000.0	141.4	-68.0			240.1	558.0		237.6	24.8	1.000053

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3951.40 FEET MSL		UPPER AIR DATA		GEODETIC COORDINATES	
24 AUG. 77		2360050073		32.62700 LAT DEG	
ASCENSION NO. 73		APACHE		106.39352 LON DEG	
0915 HRS MDT		TABLE VIII. (CONT)			

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REFL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
48500.0	137.8	-69.1			235.4	556.5	241.2	25.5	1.000052
49000.0	134.3	-70.0			230.3	555.3	244.8	25.9	1.000051
49500.0	130.9	-70.9			225.4	554.0	249.8	22.5	1.000050
50000.0	127.5	-71.8			220.6	552.8	255.9	19.1	1.000049
50500.0	124.2	-72.7			215.9	551.6	262.9	14.8	1.000048
51000.0	121.1	-73.6			211.3	550.3			1.000047
51500.0	118.0	-74.5			206.9	549.1			1.000046

STATION ALTITUDE 3951.40 FEET MSL  
 24 AUG. 77 0915 HRS MDT  
 ASCENSION NO. 73

MANDATORY LEVELS  
 2360050073  
 APACHE  
 TABLE IX.

GEODETTIC COORDINATES  
 32.62700 LAT DEG  
 106.39352 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4997.	23.0	13.5	55.	359.5	6.9	
800.0	6732.	22.3	9.5	44.	10.7	5.0	
750.0	8561.	18.3	7.0	48.	46.6	1.0	
700.0	10488.	13.9	4.2	52.	229.6	2.7	
650.0	12523.	8.9	1.0	58.	200.5	4.9	
600.0	14680.	3.6	-2.7	63.	198.5	8.8	
550.0	16976.	-2.2	-6.1	74.	229.1	8.8	
500.0	19441.	-6.7	-12.3	64.	287.3	11.5	
450.0	22122.	-10.5	-25.7	27.	275.8	18.1	
400.0	25071.	-15.0	-29.4	28.	260.5	13.8	
350.0	28339.	-22.2	-37.6	23.	252.3	11.7	
300.0	32000.	-30.0	-45.6	20.	255.4	14.4	
250.0	36162.	-41.4			260.3	16.1	
200.0	41005.	-53.2			255.7	21.2	
175.0	43792.	-58.8			265.5	22.1	
150.0	46919.	-65.3			247.4	24.1	
125.0	50493.	-72.5			265.2	13.8	

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL  
24 AUG. 77  
ASCENSION NO. 591 1000 HRS MDT

SIGNIFICANT LEVEL DATA  
2360010591  
HOLLOMAN  
TABLE X.

GEODETIC COORDINATES  
32.88863 LAT DEG  
106.09965 LON DEG

PRESSURE GEOMETRIC		TEMPERATURE		REF. HUM. PERCENT
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
876.4	4126.6	25.5	11.7	42.0
866.9	4444.8	24.9	12.5	46.0
850.0	5012.5	25.3	11.5	42.0
794.4	6955.5	23.0	6.7	35.0
700.0	10521.1	14.9	3.4	46.0
609.4	14304.5	5.2	-2.4	58.0
589.8	15177.2	3.1	-7.4	46.0
524.4	18258.4	-4.3	-10.5	62.0
500.0	19485.2	-6.3	-16.0	46.0
491.2	19940.1	-6.6	-26.3	19.0
400.0	25111.2	-15.1	-28.4	31.0
341.0	28997.2	-23.5	-42.2	16.0
300.0	32019.1	-30.7	-45.0	23.0
273.6	34138.5	-35.5	-50.8	19.0
250.0	36168.9	-41.0		
215.4	39426.0	-48.6		
200.0	41008.4	-52.0		
163.0	45234.2	-62.8		
150.0	46900.1	-64.7		
119.2	51399.8	-72.4		
114.8	52119.7	-73.7		
107.5	53384.2	-70.2		
100.0	54773.2	-74.5		



GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

UPPER AIR DATA  
2360010591  
HOLLONAN  
TABLE XI.

STATION ALTITUDE 4126.59 FEET MSL  
24 AUG 77 1000 HRS MDT  
ASCENSION NO. 591

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4126.6	676.4	25.5	11.7	42.0	1016.2	675.3	180.0	5.1	1.000285
4500.0	665.2	24.9	12.4	45.6	1004.8	674.7			1.000285
5000.0	650.4	25.3	11.5	42.1	986.6	675.1			1.000278
5500.0	635.7	24.7	10.3	40.2	971.8	674.3			1.000270
6000.0	621.3	24.1	9.1	38.4	957.3	673.5			1.000263
6500.0	607.1	23.5	7.9	36.6	942.9	672.7			1.000256
7000.0	593.1	22.9	6.7	35.1	928.9	671.9			1.000249
7500.0	579.2	21.8	6.3	36.7	916.2	670.6			1.000246
8000.0	565.5	20.6	5.9	38.2	903.6	669.3			1.000242
8500.0	552.0	19.5	5.5	39.8	891.2	668.0			1.000239
9000.0	538.8	18.4	5.0	41.3	879.0	666.6			1.000235
9500.0	525.6	17.2	4.5	42.8	867.0	665.3			1.000231
10000.0	513.1	16.1	4.0	44.4	855.1	664.0			1.000227
10500.0	500.5	14.9	3.4	45.9	843.5	662.6			1.000224
11000.0	487.8	13.7	2.7	47.5	832.0	661.1			1.000220
11500.0	475.3	12.4	2.0	49.1	820.7	659.6			1.000216
12000.0	463.1	11.1	1.3	50.7	809.5	658.1			1.000212
12500.0	451.0	9.8	.5	52.3	798.5	656.6			1.000206
13000.0	439.2	8.5	-.3	53.9	787.7	655.0			1.000204
13500.0	427.6	7.3	-1.1	55.4	777.1	653.5			1.000200
14000.0	416.2	6.0	-1.9	57.0	766.6	651.9			1.000197
14500.0	405.0	4.7	-3.4	55.3	756.2	650.4			1.000192
15000.0	393.7	3.5	-6.3	48.4	745.8	648.8			1.000185
15500.0	382.6	2.3	-7.6	47.7	735.1	647.3			1.000181
16000.0	371.6	1.1	-8.0	50.3	724.4	645.9			1.000176
16500.0	360.8	-.1	-8.5	52.9	713.8	644.5			1.000175
17000.0	350.2	-1.3	-9.0	55.5	703.5	643.0			1.000173
17500.0	339.8	-2.5	-9.6	58.1	693.3	641.6			1.000170
18000.0	329.6	-3.7	-10.2	60.7	683.3	640.2			1.000167
18500.0	319.5	-4.7	-11.5	58.8	672.9	638.9			1.000163

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.



UPPER AIR DATA  
2360010591  
HOLLAMAN  
TABLE XI. (CONT)

STATION ALTITUDE 4126.54 FEET MSL  
24 AUG. 77  
ASCENSION NO. 591

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
19000.0	504.5	-5.5	-13.7	52.3	662.1	637.0	273.6	13.4	1.000159
19500.0	495.7	-6.3	-16.2	45.1	651.5	636.8	279.6	14.5	1.000154
20000.0	490.0	-6.7	-26.3	19.1	640.3	636.1	285.0	15.7	1.000146
20500.0	480.4	-7.5	-26.4	20.3	624.7	635.1	287.6	16.2	1.000144
21000.0	471.0	-8.3	-26.5	21.5	619.2	634.1	289.7	16.7	1.000142
21500.0	461.7	-9.2	-26.6	22.6	608.9	633.2	286.8	17.8	1.000139
22000.0	452.6	-10.0	-26.8	23.8	598.8	632.2	283.6	19.0	1.000137
22500.0	443.7	-10.8	-27.0	24.9	588.9	631.2	279.0	19.6	1.000135
23000.0	435.0	-11.6	-27.2	26.1	579.1	630.2	274.7	19.6	1.000133
23500.0	426.4	-12.5	-27.4	27.3	564.5	629.2	270.3	17.7	1.000130
24000.0	418.0	-13.3	-27.7	28.4	560.1	628.2	266.3	15.9	1.000128
24500.0	409.6	-14.1	-28.0	29.6	550.8	627.2	266.5	14.6	1.000126
25000.0	401.8	-14.9	-28.3	30.7	541.7	626.2	266.8	13.5	1.000124
25500.0	393.7	-15.9	-29.6	24.5	532.9	625.0	267.3	13.6	1.000122
26000.0	385.7	-17.0	-31.3	27.6	524.3	623.6	266.7	13.6	1.000119
26500.0	377.8	-18.1	-33.0	25.6	515.9	622.3	263.3	13.2	1.000117
27000.0	370.1	-19.2	-34.7	23.7	507.6	620.9	261.3	12.8	1.000115
27500.0	362.6	-20.3	-36.5	21.8	499.4	619.6	262.6	12.6	1.000112
28000.0	355.3	-21.3	-38.3	19.8	491.4	618.3	264.6	12.5	1.000111
28500.0	348.0	-22.4	-40.2	17.9	483.5	616.9	267.6	13.0	1.000109
29000.0	341.0	-23.5	-42.2	16.0	475.7	615.6	268.4	13.4	1.000107
29500.0	333.8	-24.7	-42.5	17.2	468.0	614.1	261.2	13.2	1.000105
30000.0	326.8	-25.9	-42.9	18.3	460.4	612.6	254.4	13.4	1.000103
30500.0	320.0	-27.1	-43.4	19.5	452.9	611.2	250.3	14.0	1.000102
31000.0	313.2	-28.3	-43.8	20.6	445.6	609.7	246.6	14.6	1.000100
31500.0	306.7	-29.5	-44.4	21.8	438.3	608.2	250.5	15.0	1.000098
32000.0	300.2	-30.7	-44.9	23.0	431.3	606.7	254.4	15.4	1.000097
32500.0	293.8	-31.8	-46.3	22.1	424.0	605.3	256.5	15.8	1.000095
33000.0	287.5	-32.9	-47.6	21.1	416.8	603.9	258.3	16.1	1.000093
33500.0	281.3	-34.1	-49.0	20.2	409.8	602.4	262.4	16.0	1.000092

STATION ALTITUDE 4126.59 FEET MSL  
 24 AUG. 77 1000 HRS NDT  
 ASCENSION NO. 591

UPPER AIR DATA  
 2360010591  
 HULLMAN  
 TABLE XI. (CONT)

GEOPETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
34000.0	275.3	-35.2	-50.4	19.3	402.9	601.0	267.4	15.8	1.000093
34500.0	269.2	-36.5	-53.2	15.6**	396.3	599.3	269.6	15.8	1.000089
35000.0	263.3	-37.8	-57.2	10.9**	389.8	597.6	270.7	15.9	1.000087
35500.0	257.5	-39.2	-62.6	6.3**	383.5	595.9	268.4	17.1	1.000085
36000.0	251.9	-40.5	-73.2	1.0**	377.2	594.2	265.5	18.6	1.000084
36500.0	246.2	-41.8			370.8	592.6	263.3	20.5	1.000083
37000.0	240.7	-43.0			364.3	591.0	261.5	22.6	1.000081
37500.0	235.2	-44.2			357.9	589.5	259.8	23.9	1.000080
38000.0	229.9	-45.4			351.7	587.9	258.1	24.9	1.000078
38500.0	224.7	-46.6			345.5	586.4	256.6	25.1	1.000077
39000.0	219.6	-47.8			339.5	584.8	255.2	24.9	1.000076
39500.0	214.7	-48.9			333.5	583.3	256.2	24.7	1.000074
40000.0	209.7	-50.0			327.3	582.0	258.2	24.4	1.000073
40500.0	204.8	-51.0			321.2	580.7	260.9	24.2	1.000072
41000.0	200.1	-52.0			315.1	579.4	264.1	24.1	1.000070
41500.0	195.3	-53.3			309.4	577.7	265.5	24.3	1.000069
42000.0	190.6	-54.5			303.8	576.0	264.9	24.6	1.000068
42500.0	186.1	-55.8			298.2	574.3	264.6	25.0	1.000066
43000.0	181.6	-57.1			292.8	572.6	265.4	25.4	1.000065
43500.0	177.3	-58.4			287.5	570.9	266.0	25.9	1.000064
44000.0	173.0	-59.6			282.3	569.2	267.5	26.0	1.000063
44500.0	168.9	-60.9			277.2	567.5	268.9	26.2	1.000062
45000.0	164.9	-62.2			272.2	565.8	268.6	26.0	1.000061
45500.0	160.9	-63.1			266.8	564.6	265.3	25.4	1.000059
46000.0	156.9	-63.7			260.9	563.8	261.9	24.9	1.000058
46500.0	153.0	-64.2			255.2	563.1	255.7	25.3	1.000057
47000.0	149.2	-64.9			249.6	562.2	249.4	26.1	1.000056
47500.0	145.5	-65.7			244.3	561.1	243.6	27.2	1.000054
48000.0	141.8	-66.5			239.1	559.9	244.0	27.4	1.000053
48500.0	138.2	-67.4			234.1	558.6	244.5	27.6	1.000052

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL  
 24 AUG 77  
 ASCENSION NO. 591 1000 HRS MDT

UPPER AIR DATA  
 2360010591  
 HOLLoman  
 TABLE XI. (CONT)

GEOMETRIC COORDINATES  
 32.86865 LAT DEG  
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
49000.0	134.7	-68.3		225.1	557.6	245.4	27.6	1.000051
49500.0	131.3	-69.1		224.3	556.4	249.7	24.9	1.000050
50000.0	128.0	-70.0		219.6	555.3	255.2	22.3	1.000049
50500.0	124.6	-70.9		214.9	554.1	260.4	20.0	1.000048
51000.0	121.7	-71.7		210.4	552.9	260.9	17.5	1.000047
51500.0	118.6	-72.6		206.0	551.7	261.5	14.9	1.000046
52000.0	115.5	-73.5		201.6	550.5	264.2	11.8	1.000045
52500.0	112.6	-72.6		195.6	551.6	272.3	8.1	1.000044
53000.0	109.7	-71.3		189.2	553.5			1.000042
53500.0	106.9	-70.6		183.7	554.5			1.000041
54000.0	104.1	-72.1		180.4	552.4			1.000040
54500.0	101.4	-73.7		177.1	550.3			1.000039

STATION ALTITUDE 4126.59 FEET MSL  
24 AUG. 77 1000 HRS MDT  
ASCENSION NO. 591

MANDATORY LEVELS  
2360010591  
HOLLOMAN  
TABLE XII.

GEOMETRIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5011.	25.3	11.5	42.	9999.0	9999.0XX	
800.0	6754.	23.2	7.2	36.	9999.0	9999.0XX	
750.0	8589.	19.3	5.4	40.	235.5	.6	
700.0	10522.	14.9	3.4	46.	223.1	1.2	
650.0	12563.	9.7	.5	52.	201.1	6.0	
600.0	14724.	4.2	-4.7	52.	207.9	10.0	
550.0	17025.	-1.3	-9.0	56.	244.4	8.7	
500.0	19495.	-6.3	-16.0	46.	279.8	14.5	
450.0	22180.	-10.2	-26.8	24.	261.7	19.2	
400.0	25130.	-15.1	-28.4	31.	267.0	13.6	
350.0	28398.	-22.1	-39.7	18.	267.2	13.0	
300.0	32054.	-30.7	-45.0	23.	255.1	15.5	
250.0	36215.	-41.0			264.1	19.6	
200.0	41071.	-52.0			265.1	24.1	
175.0	43863.	-59.0			267.3	26.0	
150.0	46985.	-64.7			246.3	26.3	
125.0	50583.	-70.8			260.6	18.9	
100.0	54893.	-74.5					

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.